# FEI Faith Engineering, Inc.

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November 21, 2001

Mr. Nolan Bennett Environmental Health Scientist Bernalillo County Environmental Health Department 600 Second St. NW, Suite 500 Albuquerque, NM 87102 Sent via E-mail: <a href="mailto:nbennett@bernco.gov">nbennett@bernco.gov</a> and US Mail

RE: Transmittal of 4<sup>th</sup> Quarterly Ground Water Sampling Results

2615 Isleta SW, The Rodgers Drilling Site; NMED/USTB Facility ID No. 11017001 / 30287

Contract Control No. 980473 FEI Project No. 99-01-1186-05

## Dear Nolan:

Please find included the report for the fourth quarter of ground water sampling and analysis for the subject site. Ground water sampling was conducted on October 3 and 4, 2001.

This sampling event provides the sample results with field testing for an abbreviated round of 13 of the 29 ground water monitoring wells in the site vicinity. During this quarter's sampling event, benzene concentrations above the NMWQCC standard of 10  $\mu$ g/l were found in 4 monitoring wells; W-11, VM-4, VM-5 and VM-7. Toluene concentrations above the standard of 750  $\mu$ g/l were found in 4 monitoring wells; VM-4, VM-5, VM-7 and FTW-3. Ethylbenzene concentrations above the standard of 750  $\mu$ g/l were found in 8 monitoring wells; W-11, VM-1, VM-4, VM-5, VM-7, FTW-1, FTW-2 and FTW-3. Total xylenes concentrations above the standard of 620  $\mu$ g/l were found in 9 monitoring wells; W-11, VM-1, VM-2, VM-4, VM-5, VM-7, FTW-1, FTW-2 and FTW-3. Total naphthalene concentrations (including naphthalene, 1-methylnaphthalene and 2-methylnaphthalene) above the standard of 30  $\mu$ g/l were found in 10 monitoring wells; W-2, W-11, VM-1, VM-2, VM-4, VM-5, VM-7, FTW-1, FTW-2 and FTW-3.

Faith Engineering, Inc. is in the process of completing a Tier I/II evaluation for this site. Please do not hesitate to contact the undersigned if you have any questions or comments regarding this Sampling Report.

Respectfully submitted,

TECUMSEH PROFESSIONAL ASSOCIATES, INC.

FAITH ENGINEERING, INC.

William J. Brown, C.S. #077 Senior Hydrogeologist Stuart E. Faith, P.E., C.S. #080 President

cc. w/ encls. Mr. Tom Leck - NMED/USTB

# FOURTH QUARTERLY SAMPLING REPORT THE RODGER'S DRILLING SITE 2615 ISLETA BLVD. SW ALBUQUERQUE, NEW MEXICO FACILITY #11017001/30287

PREPARED BY:

**FAITH ENGINEERING, INC.**541 QUANTUM RD. NE

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NOVEMBER 21, 2001

PREPARED FOR:

THE BERNALILLO COUNTY ENVIRONMENTAL HEALTH DEPARTMENT

ΔΝΓ

THE NEW MEXICO ENVIRONMENT DEPARTMENT UNDERGROUND STORAGE TANK BUREAU

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# COVER PAGE FORM 1223 QUARTERLY MONITORING REPORT

Please include the following information:

Rodger's Drilling
Mr. Nolan Bennett
ng address (list contact person if different):
Bernalillo County Environmental Health Dept.
600 2 <sup>nd</sup> Street NW, Suite 500
Albuquerque, NM 87102
11017001/30287
tion: 2615 Isleta Blvd. SW
Albuquerque, NM
npany: <u>Tecumseh Professional Associates, Inc.</u>
11/21/2001
f release or date USTB was notified of the release
1988

Form 1223

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# STATEMENT OF FAMILIARITY

l, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.

Signature:	
Name:	William J. Brown
	Tecumseh Professional Associates, Inc.
Title:	Senior Hydrogeologist
Certified Scientist	#: <u>0</u> 77
Date:	

Site Name: Rodger's Drilling USTB Facility #30287

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## I. INTRODUCTION:

# I. A. Scope of Work

Faith Engineering, Inc. (FEI), in collaboration with Tecumseh Professional Associates, Inc. (TPA), has been retained by the Bernalillo County Environmental Health Department to provide professional environmental services at the Rodger's Drilling site, 2615 Isleta SW, Albuquerque, New Mexico (the Site). The location of the Site is shown on Figure 1. This report documents the fourth quarter of ground water sampling conducted at the site on October 3 and 4, 2001. The period covered in this report is from July 2001 to October 2001.

## I. B. This quarter's highlights

This sampling event represents the fourth quarter of ground water quality re-examination as outlined in the work plan approval letter dated November 11, 1999, as amended on March 17, 2000 and again on November 17, 2000. The sampling event provides the sample results with field testing for an abbreviated round of 13 of the 29 ground water monitoring wells on site.

## II. ACTIVITIES PERFORMED DURING THIS QUARTER:

# II. A. Brief description of the remediation system and date installed

Initial investigation activities were conducted at the site by Metric in 1989 and 1990 under contract with Rodgers Drilling Inc. Nineteen drive points and 2 hollow stem auger monitor wells were installed in the site vicinity identifying a large dissolved-phase Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) groundwater plume. In 1991, Metric installed a passive air-inlet soil remediation system at the Site. Five trenches approximately 50 feet in length were excavated to the water table allowing for four-inch diameter PVC slotted screens to be placed horizontally and manifolded to above ground wind turbines. The trenches were back filled with gravel and capped with asphalt. Additionally, 150 cubic yards of soil was reportedly removed from the former UST location.

The Rodgers Site was added to the NMED list of GWPA State Lead remediation projects in 1992. NMED retained Billings and Associates, Inc. (BAI) to evaluate site conditions and implement an enhanced remedial strategy. BAI installed an in-situ SVVS<sup>TM</sup> remediation system consisting of 2 primary lines of sparge and vent wells. A line of 20 sparge/vent wells are indicated from the BAI site plan as being located along the south side of the Rodgers building. The exact location is unclear and may be located on either side of the Auto Zone/Rodgers property boundary and can only be estimated as all components of this line are buried. An additional 7 sparge/vent wells are located along the north side of the Rodgers property and can be located from evidence in the field. The AS/VE system was operated for approximately 3 years prior to shutdown.

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It appears that two source areas are present in the site vicinity; one located in the vicinity of the former USTs on the Rodgers property, and one located north of the site in the vicinity of the former Sparkle Car Wash USTs (see Figure 1). In 1990, approximately 250 yards of hydrocarbon contaminated soil was excavated from the Sparkle UST pit and allowed to aerate on-site. An active horizontal groundwater sparging/passive vadose zone venting system was installed in the excavation pit. This system was operated for approximately 3 months before being turned off.

## II. B. Description of activities performed to keep system operating properly

None. The Rodgers SVVS<sup>™</sup> remediation system was shut down in 1997.

# II. C. Monitoring activities performed

Ground water monitoring and sampling at the Site during this quarter took place on October 3 and 4, 2001. This quarter's sampling included the following:

- ground water elevation measurements in all wells.
- quarterly event ground water sampling of monitor wells W-2, W-3, W-11, W-14, W-23, VM-1, VM-2, VM-4, VM-5, VM-7, FTW-1, FTW-2, and FTW-3.
- laboratory analysis of ground water samples for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), Methyl-t-Butyl Ether (MTBE), Tri-Methyl Benzenes (TMBs), Ethylene Dibromide (EDB), Ethylene Dichloride (EDC), Naphthalene, 1-Methylnaphthalene and 2-Methylnaphthalene by EPA Method 8260 PBMS (expanded naphthalenes).
- field testing for natural attenuation indicators of ground water samples, including iron, phosphate, sulfide, nitrate, alkalinity, pH, dissolved oxygen, conductivity, and temperature.

The locations of all monitor wells are shown on Figure 1. Monitoring and sampling procedures are described in Appendix 1. The laboratory results of the ground water analyses for the current monitoring period are shown on Table 1. Historic ground water sampling results are shown on Tables 2a and 2b. Laboratory reports and the Chain of Custody Form are provided in Appendix 3. Table 3 presents cumulative ground water level measurements for the site. Table 4 provides a historical summary of field activities at the site and Appendix 2 contains this quarter's original field notes.

During this quarter's sampling event, benzene concentrations above the NMWQCC standard of 10  $\mu$ g/l were found in 4 monitoring wells; W-11 (1800  $\mu$ g/l), VM-4 (5700  $\mu$ g/l), VM-5 (6700  $\mu$ g/l) and VM-7 (61  $\mu$ g/l). Toluene concentrations above the standard of 750  $\mu$ g/l were found in 4 monitoring wells; VM-4 (1800  $\mu$ g/l), VM-5 (11000  $\mu$ g/l), VM-7 (14000  $\mu$ g/l) and FTW-3 (1400  $\mu$ g/l). Ethylbenzene concentrations above the standard of 750  $\mu$ g/l were found in 8 monitoring wells; W-11 (1500  $\mu$ g/l), VM-1 (1900  $\mu$ g/l), VM-

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 $4 (1300 \mu g/l)$ , VM-5 (1500  $\mu g/l)$ , VM-7 (2400  $\mu g/l)$ , FTW-1 (780  $\mu g/l)$ , FTW-2 (1100  $\mu g/l)$  and FTW-3 (1100  $\mu g/l)$ . Total xylenes concentrations above the standard of 620  $\mu g/l$  were found in 9 monitoring wells; W-

μg/l), FTW-1 (3800 μg/l), FTW-2 (3600 μg/l ) and FTW-3 (3200 μg/l). Total naphthalenes concentrations

(including naphthalene, 1-methylnaphthalene and 2-methylnaphthalene) above the standard of 30 µg/l

were found in 10 monitoring wells; W-2, W-11, VM-1, VM-2, VM-4, VM-5, VM-7, FTW-1, FTW-2 and FTW-

3. These concentrations ranged from 284 µg/l in FTW-1 to 860 µg/l in VM-1. A total BTEX summary and

dissolved-phase benzene contour map for the fourth quarter ground water analysis are shown on Figure

1.

Depth to ground water during this quarter's sampling event varied from 6.48 feet below ground surface

(bgs) in well W-6 to 8.76 feet bgs in well W-14. All ground water elevation data including the historical data

is summarized in Table 3. This quarter's measurements of on-site ground water elevations indicate a

variable ground water flow direction to the northwest, west and south at a gradient of approximately 0.001

feet/foot. A water elevation summary and directional flow map for the fourth quarter ground water

measurements are shown on Figure 2.

II. D. System performance and effectiveness

Not Applicable, See II. A. and B.

II. E. Statement verifying containment of release

Based on ground water sample results from site perimeter monitoring wells and the recently completed

Hydrogeologic Investigation, high levels of dissolved phase hydrocarbons are present in the ground

water which extend off-site to the north onto the Sparkle Car Wash property and south onto the Auto

Zone property. Please refer to Figure 1. Long-term monitoring by the responsible party indicates that the

Sparkle Car Wash plume is relatively restricted in size, is partially remediated, and has not co-mingled with

the Rodgers Site plume. There is no evidence to suggest additional off-site, up-gradient sources of

contamination for the BTEX concentration levels. Sporadic long-term monitoring of Rodgers ground

water wells suggest the dissolved-phase plume is in the state of hydrodynamic equilibrium.

**III. SUMMARY AND CONCLUSIONS:** 

III. A. Discussion of trends or changes noted in analytical results or site conditions

Laboratory results obtained during this fourth quarter sampling event and the Hydrogeologic Investigation

indicate that BTEX concentrations in the ground water have migrated from the site's former UST location

off-site, north to the Sparkle Car Wash property and south to the Auto Zone property. BTEX

concentrations are above the NMWQCC standards in monitoring wells on these properties. Naphthalenes

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concentrations are also above the NMWQCC standard of 30 µg/l in monitoring wells W-2, W-11, VM-1 and VM-2 at the site's north and south property boundary. Concentrations of organics have increased in wells VM-1, VM-5, VM-7, FTW-1, FTW-2, and FTW-3 since the prior sampling event; concentrations have decreased in wells W-2, W-11, VM-2, and VM-4. Further sampling events are needed to establish long-term trends of contaminant migration at the site. The laboratory results of the ground water shown on Table 1 indicate that the contaminant plume may be characterized as an older and weathered petroleum release. Previously collected soil data indicate both gasoline and diesel hydrocarbons are present at the

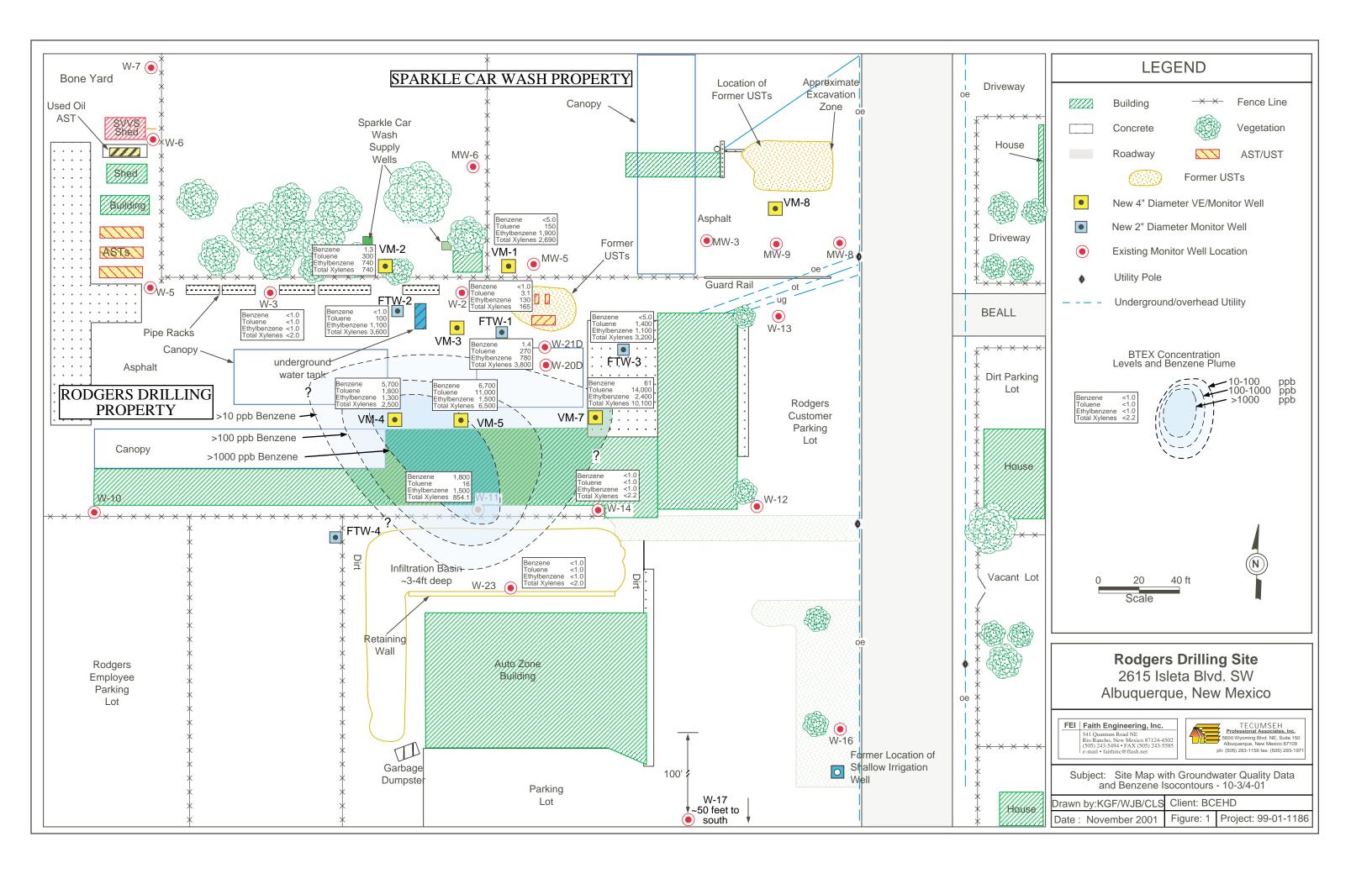
# III. B. Ongoing assessment of the remediation system

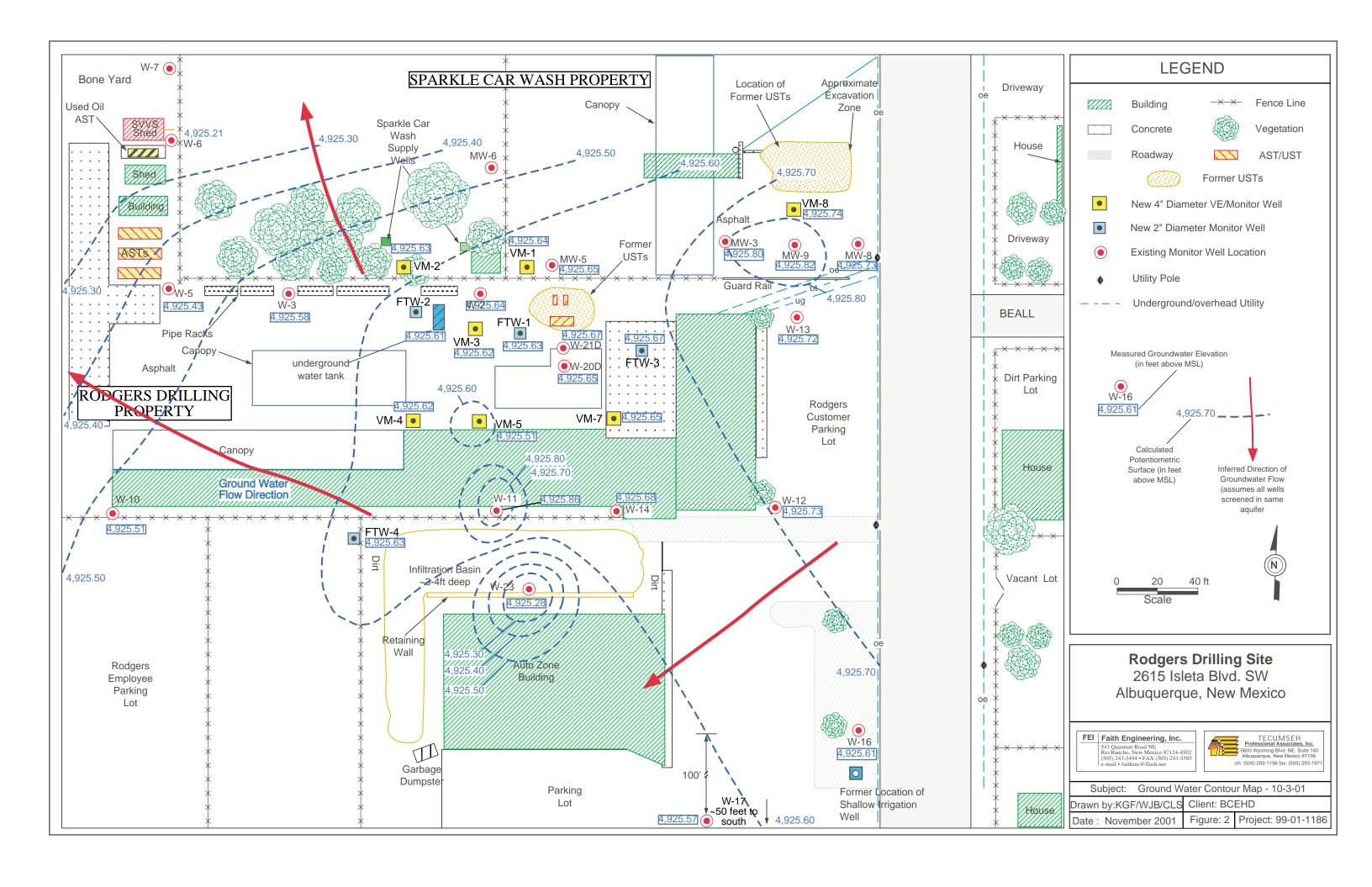
Not Applicable, See II. A. and B.

Site.

## III. C. Recommendations

FEI is currently conducting a Tier I/II Risk Based Decision Making (RBDM) evaluation to determine future actions. Following completion of the Tier I/II RBDM evaluations, FEI/TPA will provide recommendations for the Site.





# TABLE 1 Rodger's • 2615 Isleta 99-01-1186-05 • NMED FACILITY #30287

## **CURRENT GROUND WATER ANALYSIS RESULTS**

						ORG	ANICS	5						I	NOR(	GANI	CS		IN	DICATO	RS
LOCATION	DATE SAMPLED	Benzene	Toluene Ethylbenzene Total Xylenes  MTBE  EDB  EDC  TMB  TMB  1-METHYL NAPHTHALENE  2-METHYL NAPHTHALENE  2-METHYL NAPHTHALENE  2-METHYL NAPHTHALENE							IRON	PHOSPHATE	SULFIDE	ALKALINITY as CaCO.	DISS 02	NITRATE	Нф	CONDUCTIVITY	TEMP			
UNIT		μg/l	μg/l	μg/l	μg/l	μg/l	μg/l	ug/l	μg/l	μg/l	μg/l	μg/l	mg/l	mg/	mg/l	mg/l	mg/l	mg/l		µmhos/cm	°C
STANDA	RDS	<u>10</u>	<u>750</u>	<u>750</u>	<u>620</u>	<u>100</u>	<u>0.1</u>	<u>10</u>			<u>30</u>		<u>1.0</u>					<u>10.0</u>			
W-2	10/04/01	< 1.0	3.1	130	165	18	< 1.0	< 1.0	1250	73	140	85	>10	3.5	< 1.0	225	0.01	1.0	8.37	1651	23.4
W-3	10/04/01	< 1.0	< 1.0	< 1.0	< 2.0	24	< 1.0	< 1.0	< 2.0	< 3.0	< 5.0	< 5.0	4.0	2.5	< 1.0	275	0.01	2.3	8.21	2004	23.3
W-11	10/03/01	1800	16	1500	854.1	< 1.0	< 1.0	< 1.0	251	310	92	120	3.0	4.0	< 1.0	175	0.02	2.3	7.90	1861	23.2
W-14	10/03/01	< 1.0	< 1.0	< 1.0	<2.2	< 1.0	< 1.0	< 1.0	< 2.0	< 3.0	< 5.0	< 5.0	2.0	1.5	< 1.0	200	0.02	1.0	7.98	2470	25.5
W-23	10/04/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 3.0	< 5.0	< 5.0	2.0	2.0	< 1.0	250	0.01	1.0	8.03	1685	22.4
VM-1	10/04/01	< 5.0	150	1900	2690	< 5.0	< 5.0	< 5.0	1830	600	150	110	1.0	1.0	1.0	300	0.02	1.0	8.21	2073	22.9
VM-2	10/03/01	1.3	300	740	740	13	< 1.0	< 1.0	842	150	170	71	1.0	3.0	< 1.0	275	0.03	1.0	8.41	2238	22.3
VM-4	10/04/01	5700	1800	1300	2500	< 10	< 10	< 10	649	230	< 50	< 50	5.5	3.0	< 1.0	300	0.01	< 1.0	7.81	1861	23.8
VM-5	10/04/01	6700	11000	1500	6500	< 5.0	< 5.0	< 5.0	1550	300	< 25	79	2.0	2.0	0.5	225	0.01	< 1.0	7.99	1878	23.6
VM-7	10/04/01	61	14000	2400	10100	< 5.0	< 5.0	< 5.0	2010	540	57	140	1.5	2.0	< 1.0	250	0.01	< 1.0	8.02	1988	24.2
FTW-1	10/04/01	1.4	270	780	3800	4.2	< 1.0	< 1.0	790	180	39	65	2.5	1.0	< 1.0	350	0.01	1.0	8.08	2095	24.4
FTW-2	10/04/01	< 1.0	100	1100	3600	4	< 1.0	< 1.0	1170	330	110	150	1.5	2.0	< 1.0	250	0.01	< 1.0	8.16	1819	23.7

< 5.0 < 5.0 < 5.0 1350 **230** 

< 1.0 | < 1.0 | < 1.0 | < 2.0 | < 3.0 | < 5.0 | < 5.0

36

85

Data checked \_\_\_\_\_/ \_\_\_\_\_

10/04/01

10/03-04/01 < 1.0

< 5.0

1400

< 1.0

1100

< 1.0

3200

< 2.0

FTW-3

TRIP BLANK

**1.0** | 1.5 | < 1.0 | 250 | 0.01 | 1.0 | 8.18 | 2427

# TABLE 2a Rodger's 2615 Isleta

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HISTORICAL GROUND WATER ANALYSIS RESULTS/ORGANICS

						(	ORGANIC	S				
LOCATION	DATE SAMPLED	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	TMB	NAPHTHALENE	1-METHYL NAPHTHALENE	2-METHYL NAPHTHALENE
UNIT STANDA		μg/l <u>10</u>	μg/l <u>750</u>	μg/l <u>750</u>	μg/l <u>620</u>	μg/l <u>100</u>	μg/l <u>0.1</u>	ug/l <u>10</u>	μg/l	μg/l	μg/l <u>30</u>	μg/l
MW - 3	09/25/00	< 1.0	< 1.0	< 1.0	< 2.0	7.2	< 1.0	< 1.0	< 2.0	< 1.0	*	*
MW - 5	09/25/00	< 1.0	< 1.0	1.0	< 2.0	20	< 1.0	< 1.0	<4.4	< 1.0	*	*
MW - 8	09/26/00	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*
W - 2	09/25/00	< 5.0	< 5.0	240	423	30	< 5.0	< 5.0	1640	130	*	*
	05/21/01	< 1.0	1.1	110	107	< 1.0	< 1.0	< 1.0	897	52	110	51
	07/02/01	< 5.0	< 5.0	140	174	5.8	< 5.0	< 5.0	1460	76	140	100
	10/04/01	< 1.0	3.1	130	165	18	< 1.0	< 1.0	1250	73	140	85
W - 3	09/25/00	< 1.0	< 1.0	2.5	4.5	29	< 1.0	< 1.0	< 2.0	< 1.0	*	*
	05/18/01	< 1.0	< 1.0	< 1.0	<2.0	26	< 1.0	< 1.0	<2.0	<1.0	< 5.0	< 5.0
	07/02/01	< 1.0	< 1.0	< 1.0	< 2.0	31	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 5.0
	10/04/01	< 1.0	< 1.0	< 1.0	< 2.0	24	< 1.0	< 1.0	< 2.0	< 3.0	< 5.0	< 5.0
W - 5	09/25/00	< 1.0	< 1.0	< 1.0	< 2.0	4.3	< 1.0	< 1.0	< 2.0	< 1.0	*	*
W - 6	09/25/00	< 1.0	< 1.0	< 1.0	< 2.0	10	< 1.0	< 1.0	< 2.0	< 1.0	*	*
W - 10	09/25/00	< 1.0	< 1.0	< 1.0	< 2.0	1.7	< 1.0	< 1.0	< 2.0	< 1.0	*	*
W - 11	09/25/00	2300	< 20	1400	<1020	< 20	< 20	< 20	< 340	390	*	*
	05/21/01	6100	47	760	360	< 25	< 25	< 25	64	110	<130	<130
	07/02/01	5700	< 50	2000	1700	< 50	< 50	< 50	390	430	< 250	< 250
	10/03/01	1800	16	1500	854.1	< 1.0	< 1.0	< 1.0	251	310	92	120
W - 12	09/26/00	< 1.0	< 1.0	1.0	< 2.0	< 1.0	< 1.0	< 1.0	19.4	1.8	*	*
W - 13	09/25/00	< 1.0	< 1.0	< 1.0	< 2.0	1.3	< 1.0	< 1.0	< 2.0	< 1.0	*	*
W - 14	09/25/00	3.2	< 1.0	41	4.9	1.7	< 1.0	< 1.0	<5.4	2.9	*	*
	05/21/01	38	1.6	21	16.8	< 1.0	< 1.0	< 1.0	34.4	4.3	< 5.0	< 5.0
	07/02/01	3.8	< 1.0	7.0	4.5	< 1.0	< 1.0	< 1.0	4.0	1.1	< 5.0	< 5.0
	10/03/01	< 1.0	< 1.0	< 1.0	< 2.2	< 1.0	< 1.0	< 1.0	< 2.0	< 3.0	< 5.0	< 5.0

# **TABLE 2a** Rodger's 2615 Isleta

99-01-1186-05 • NMED FACILITY #30287
HISTORICAL GROUND WATER ANALYSIS RESULTS/ORGANICS

			ORGANICS											
LOCATION	DATE SAMPLED	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	TMB	NAPHTHALENE	1-METHYL NAPHTHALENE	2-METHYL NAPHTHALENE		
UNIT		μg/l	μg/l	μg/l	μg/l	μg/l	μg/l	ug/l	μg/l	μg/l	μg/l	μg/l		
STANDA	RDS	<u>10</u>	<u>750</u>	<u>750</u>	<u>620</u>	<u>100</u>	<u>0.1</u>	<u>10</u>			<u>30</u>			
W - 16	09/26/00	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*		
W - 17	09/26/00	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*		
W - 20D	09/26/00	< 1.0	< 1.0	< 1.0	< 2.0	5.4	< 1.0	< 1.0	< 2.0	< 1.0	*	*		
W - 21D	09/26/00	< 1.0	< 1.0	< 1.0	< 2.0	6.1	< 1.0	< 1.0	< 2.0	< 1.0	*	*		
W - 23	09/26/00	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*		
	01/16/01	ND	ND	ND	ND	ND	ND	ND	ND	ND	*	*		
	05/21/01	53	< 1.0	2.3	<2.0	< 1.0	< 1.0	< 1.0	<2.0	1.7	< 5.0	< 5.0		
	07/02/01	< 1.0	< 1.0	< 1.0	< 2.0	2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 5.0		
	10/04/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 3.0	< 5.0	< 5.0		
MW - 9	09/25/00	< 1.0	< 1.0	120	40	4.0	0.0	600	10.0	0.2	*	*		
VM - 1	01/16/01	ND	760	1500	3300	ND	ND	ND	1790	840	*	*		
	05/21/01	< 10	120	1400	1850	< 10	< 10	< 10	1271	270	140	110		
	07/02/01	< 10	120	1400	1800	< 10	< 10	< 10	1591	390	180	92		
	10/04/01	< 5.0	150	1900	2690	< 5.0	< 5.0	< 5.0	1830	600	150	110		
VM - 2	01/16/01	ND	190	1300	2000	ND	ND	ND	1700	310	*	*		
	05/21/01	< 10	510	1000	1310	< 10	< 10	< 10	1330	180	100	110		
	07/02/01	< 10	320	720	760	11	< 10	< 10	958	150	140	91		
	10/03/01	1.3	300	740	740	13	< 1.0	< 1.0	842	150	170	71		
VM - 3	01/16/01	ND	2800	1100	4400	ND	ND	ND	1240	210	*	*		
VM - 4	01/16/01	6600	4100	2300	6600	ND	ND	ND	2020	360	*	*		
	05/21/01	7200	1600	2200	3940	< 5.0	< 5.0	< 5.0	1260	410	120	150		
	07/02/01	6600	2800	2600	5300	< 50	< 50	< 50	1680	450	59**	82**		
	10/04/01	5700	1800	1300	2500	< 10	< 10	< 10	649	230	< 50	< 50		

# **TABLE 2a** Rodger's 2615 Isleta

99-01-1186-05 • NMED FACILITY #30287 HISTORICAL GROUND WATER ANALYSIS RESULTS/ORGANICS

						(	ORGANIC	S				
LOCATION	DATE SAMPLED	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	EDC	TMB	NAPHTHALENE	1-METHYL NAPHTHALENE	2-METHYL NAPHTHALENE
UNIT	S	μg/l	μg/l	μg/l	μg/l	μg/l	μg/l	ug/l	μg/l	μg/l	μg/l	μg/l
STANDA	RDS	<u>10</u>	<u>750</u>	<u>750</u>	<u>620</u>	<u>100</u>	<u>0.1</u>	<u>10</u>			<u>30</u>	
VM - 5	01/16/01	8700	13000	1500	8500	ND	ND	ND	1610	270	*	*
	05/21/01	7700	14000	1600	6200	< 10	< 10	< 10	1520	320	170	170
	07/02/01	4800	9500	1300	5400	< 50	< 50	< 50	1360	230	25**	42**
	10/04/01	6700	11000	1500	6500	< 5.0	< 5.0	< 5.0	1550	300	< 25	79
VM - 7	01/16/01	260	9600	2000	8500	ND	ND	ND	1960	380	*	*
	05/18/01	160	10000	2000	8200	< 50	< 50	< 50	1890	610	720	610
	07/02/01	< 100	6900	1600	5900	< 100	< 100	< 100	1350	340	< 500	< 500
	10/04/01	61	14000	2400	10100	< 5.0	< 5.0	< 5.0	2010	540	57	140
FTW - 1	01/16/01	ND	440	900	5600	ND	ND	ND	1770	280	*	*
	05/21/01	< 20	200	560	2680	< 20	< 20	< 20	830	170	140	160
	07/02/01	< 10	120	350	1640	< 10	< 10	< 10	337	77	< 50	< 50
	10/04/01	1.4	270	780	3800	4.2	< 1.0	< 1.0	790	180	39	65
FTW - 2	01/16/01	ND	1100	1200	3100	ND	ND	ND	1350	300	*	*
	05/18/01	< 5.0	230	720	2030	< 5.0	< 5.0	< 5.0	840	150	68	69
	07/02/01	< 5.0	120	810	2020	10	< 5.0	< 5.0	890	170	51	50
	10/04/01	< 1.0	100	1100	3600	4	< 1.0	< 1.0	1170	330	110	150
FTW - 3	01/16/01	ND	2600	1100	4000	ND	ND	ND	1390	260	*	*
	05/18/01	< 20	2300	1300	4700	< 20	< 20	< 20	3160	380	210	310
	07/02/01	< 20	880	510	1680	< 20	< 20	< 20	800	120	< 100	< 100
	10/04/01	< 5.0	1400	1100	3200	< 5.0	< 5.0	< 5.0	1350	230	36	85
FTW - 4	01/16/01	ND	ND	ND	ND	20	ND	ND	ND	ND	*	*

<sup>\* -</sup> Not Sampled or Tested

Data c	hecked	/	<sup>′</sup>

<sup>\*\* -</sup> Results Using EPA Method 8270 SIMS

# TABLE 2b

Rodger's • 2615 Isleta SW
99-01-1186-05 • NMED FACILITY #30287
HISTORICAL GROUND WATER ANALYSIS RESULTS/INORGANICS

			INC	ORGA	NICS				IN	NDICATOR	RS
LOCATION	DATE SAMPLED	IR	РНОЅРНАТЕ	SULFIDE	ALKALINITY as CaCO.	DISS 02	NITRATE	Hd	CONDUCTIVITY	TEMP	
	NITS DARDS	SOLUBLE	g/l TOTAL- <u>1.0</u>	mg/l	mg/l	mg/l	mg/l	mg/l 10		μmhos/cm	,C
MW - 3	09/25/00	50	50	0.0	1.0	550	5.0	0.4	7.39	2887	24.6
MW - 5	09/25/00	0.3	0.3	1.5	0.2	250	0.5	1.0	7.23	2562	24.1
MW - 8	09/26/00	*	0.1	1.5	0.0	350	0.5	0.3	6.95	3065	24.8
W - 2	09/25/00	20	40	3.0	2.0	*	*	0.3	7.47	2441	23.2
	05/21/01	*	40	4.0	0.2	500	5.0	0.1	7.27	1368	29.0
	07/02/01	*	40	4.0	0.0	600	10.0	0.2	7.38	1751	23.3
	10/04/01	*	>10	3.5	< 1.0	225	0.01	1.0	8.37	1651	23.4
W - 3	09/25/00	4.0	32	5.0	0.2	400	4.0	0.1	7.07	2358	21.7
	05/18/01	*	20	5.0	6.0	350	3.0	0.4	6.93	2666	19.3
	07/02/01	*	3.0	4.0	0.0	250	2.0	0.6	6.98	2528	21.7
	10/04/01	*	4.0	2.5	< 1.0	275	0.01	2.3	8.21	2004	23.3
W - 5	09/25/00	0.0	0.1	1.5	0.0	250	0.5	1.0	6.87	2268	22.2
W - 6	09/25/00	0.1	0.1	3.0	0.0	300	0.5	0.6	6.92	2538	21.6
W - 10	09/25/00	0.1	0.2	1.0	0.0	300	1.0	0.8	7.05	2095	19.6
W - 11	09/25/00	1.0	2.0	1.5	0.3	500	1.5	1.0	7.12	2113	21.6
	05/21/01	*	2.0	2.0	0.0	500	3.0	0.6	7.08	1838	20.5
	07/02/01	*	1.5	5.0	0.0	500	5.0	0.6	7.03	1955	21.3
	10/03/01	*	3.0	4.0	< 1.0	175	0.02	2.3	7.90	1861	23.2
W - 12	09/26/00	*	0.3	1.0	0.1	200	2.0	1.5	7.24	2716	23.3
W - 13	09/25/00	1.0	1.0	0.3	0.0	350	1.0	1.0	7.11	2844	26.4
W - 14	09/25/00	4.0	5.0	2.0	0.1	500	2.0	1.0	7.11	2495	21.8
	05/21/01	*	5.0	0.0	0.0	500	4.0	0.3	7.00	2271	22.2
	07/02/01	*	2.0	2.0	0.0	500	4.0	1.0	6.98	2523	21.6
	10/03/01	*	2.0	1.5	< 1.0	200	0.02	1.0	7.98	2470	25.5
W - 16	09/26/00	*	*	*	*	*	*	*	*	*	*
W - 17	09/26/00	*	*	*	*	*	*	*	*	*	*
W - 20D	09/26/00	1.0	1.0	0.3	0.4	350	1.0	1.0	7.22	2746	18.7
W - 21D	09/26/00	1.5	1.5	3.0	0.0	250	1.5	0.6	6.96	2903	19.1
W - 23	09/26/00	*	2.0	7.0	0.0	275	1.0	0.3	6.87	2397	23.0
	01/16/01	*	*	*	*	*	0.80	*	7.98	40.8	10.3
	05/21/01	*	3.0	2.0	0.0	350	2.0	0.6	6.91	1708	20.4
	07/02/01	*	2.0	2.0	0.0	500	1.0	0.8	6.93	2330	23.6
	10/04/01	*	2.0	2.0	< 1.0		0.01	1.0	8.03	1685	22.4
MW - 9	09/25/00	*	1.0	2.5	0.0	225	1.0	0.6	7.04	2660	26.4

# TABLE 2b

# Rodger's • 2615 Isleta SW 99-01-1186-05 • NMED FACILITY #30287

HISTORICAL GROUND WATER ANALYSIS RESULTS/INORGANICS

			INC	ORGA	NICS				IN	NDICATOR	RS
LOCATION	DATE SAMPLED	IR	ON	РНОЅРНАТЕ	SULFIDE	ALKALINITY as CaCO.	DISS 02	NITRATE	Hd	CONDUCTIVITY	TEMP
	NITS DARDS	SOLUBLE	g/l TOTAL- <u>1.0</u>	mg/l	mg/l	mg/l	mg/l	mg/l <u>10</u>		μmhos/cm	°C
VM - 1	01/16/01	< 0.02	7.56	< 0.5	250	930	0.83	< 0.5	8.07	125.4	13.1
	05/21/01	*	8.0	0.4	2.0	500	6.0	0.4	7.22	1066	20.8
	07/02/01	*	0.8	0.6	0.0	400	2.0	1.0	7.23	2098	23.7
	10/04/01	*	1.0	1.0	1.0	300	0.02	1.0	8.21	2073	22.9
VM - 2	01/16/01	< 0.02	3.30	< 0.5	280	820	0.74	< 0.5	7.81	100.8	14.0
	05/21/01	*	0.2	1.0	2.0	400	2.0	0.2	7.43	2324	20.9
	07/02/01	*	0.3	7.0	1.0	600	0.5	1.5	7.38	2269	22.1
	10/03/01	*	1.0	3.0	< 1.0	275	0.03	1.0	8.41	2238	22.3
VM - 3	01/16/01	0.07	14.3	< 0.5	400	710	0.43	< 0.5	7.63	231.0	15.5
VM - 4	01/16/01	0.15	11.7	< 0.5	1.1	990	0.63	< 0.5	7.29	166.2	13.6
	05/21/01	*	10	5.0	7.0	500	2.0	0.4	6.68	2080	21.4
	07/02/01	*	14	5.0	0.0	500	1.0	0.0	6.82	2076	23.4
	10/04/01	*	5.5	3.0	< 1.0	300	0.01	< 1.0	7.81	1861	23.8
VM - 5	01/16/01	0.05	7.98	< 0.5	240	780	0.82	< 0.5	7.45	203.0	14.1
	05/21/01	*	3.0	3.0	1.0	600	2.0	0.2	6.90	2039	20.4
	07/02/01	*	2.0	0.2	0.0	500	3.0	1.0	7.11	2048	23.7
	10/04/01	*	2.0	2.0	0.5	225	0.01	< 1.0	7.99	1878	23.6
VM - 7	01/16/01	0.03	2.19	< 0.5	52	880	1.20	< 0.1	7.60	194.0	13.2
	05/18/01	*	1.5	0.2	0.3	550	4.0	1.0	6.94	2120	21.2
	07/02/01	*	1.5	4.0	0.2	500	3.0	1.5	7.00	2330	24.1
	10/04/01	*	1.5	2.0	< 1.0	250	0.01	< 1.0	8.02	1988	24.2
FTW - 1	01/16/01	< 0.02	9.74	< 0.5	540	530	0.46	< 0.1	7.56	231.0	16.1
	05/21/01	*	2.0	2.0	0.0	350	2.0	0.4	7.03	2151	20.0
	07/02/01	*	1.0	2.0	0.0	350	1.0	1.0	6.96	2345	22.9
	10/04/01	*	2.5	1.0	< 1.0	350	0.01	1.0	8.08	2095	24.4
FTW - 2	01/16/01	< 0.02	8.80	< 0.5	390	470	0.51	< 0.5	7.58	89.7	15.5
	05/18/01	*	0.6	0.2	0.0	350	3.0	1.5	6.95	972	21.4
	07/02/01	*	0.4	0.6	0.0	500	4.0	1.5	7.02	1939	22.2
	10/04/01	*	1.5	2.0	< 1.0	250	0.01	< 1.0	8.16	1819	23.7
FTW - 3	01/16/01	< 0.02	2.97	< 0.5	740	600	0.49	< 0.1	7.51	254.0	16.4
	05/18/01	*	3.0	2.0	2.0	350	1.0	0.8	7.14	2241	21.8
	07/02/01	*	0.3	0.3	0.8	300	1.0	1.0	7.05	2594	23.6
	10/04/01	*	1.0	1.5	< 1.0			1.0	8.18	2427	23.8
FTW - 4	01/16/01	< 0.02	3.42	< 0.5	570	560	0.69	< 0.1	7.49	231.0	15.5

* -	Not	Sampl	led	or	Tested	l

Data checked \_\_\_\_\_ / \_\_\_\_

# TABLE 3 99-01-1186-01 • Rodger's 2615 Isleta Blvd NMED FACILITY #30287

# SUMMARY OF GROUND WATER ELEVATION MEASUREMENTS

WELL NUMBER	ELEVATION (feet above datum)	DATE	STATIC (feet BG)	WATER LEVEL (feet AD)	(+) = RISING (-) = FALLING
NUMBER	(leet above datum)		(leet bd)	(leet AD)	(-) = FALLING
MW-3	4934.51	9/25/00	8.63	4925.88	
		5/18/01	8.46	4926.05	0.17
		7/2/01	8.84	4925.67	-0.38
		10/3/01	8.71	4925.80	0.13
MW-5	4933.36	9/25/00	7.68	4925.68	
		5/18/01	7.48	4925.88	0.20
		7/2/01	7.48	4925.88	0.00
		10/3/01	7.71	4925.65	-0.23
MW-8	4933.43	9/26/00	7.64	4925.79	
		5/18/01	7.46	4925.97	0.18
		7/2/01	7.83	4925.60	-0.37
		10/3/01	7.70	4925.73	0.13
MW-9	4934.10	9/25/00	8.22	4925.88	
		5/18/01	8.03	4926.07	0.19
		7/2/01	8.42	4925.68	-0.39
		10/3/01	8.28	4925.82	0.14
W-2	4933.56	9/25/00	7.88	4925.68	
		5/18/01	7.67	4925.89	0.21
		7/2/01	8.06	4925.50	-0.39
		10/3/01	7.92	4925.64	0.14
W-3	4932.68	9/25/00	7.07	4925.61	
		5/18/01	6.85	4925.83	0.22
		7/2/01	7.24	4925.44	-0.39
		10/3/01	7.10	4925.58	0.14
W-5	4932.28	9/25/00	6.69	4925.59	
		5/18/01	6.48	4925.80	0.21
		7/2/01	6.86	4925.42	-0.38
		10/3/01	6.85	4925.43	0.01
W-6	4931.69	9/25/00	6.46	4925.23	
		5/18/01	6.24	4925.45	0.22
		7/2/01	6.62	4925.07	-0.38
		10/3/01	6.48	4925.21	0.14
W-10	4932.64	9/25/00	7.11	4925.53	
		5/18/01	6.92	4925.72	0.19
		7/2/01	7.49	4925.15	-0.57
		10/3/01	7.13	4925.51	0.36
W-11	4933.68	9/25/00	7.98	4925.70	
		5/18/01	7.78	4925.90	0.20
		7/2/01	8.15	4925.53	-0.37
		10/3/01	7.82	4925.86	0.33

# TABLE 3 99-01-1186-01 • Rodger's 2615 Isleta Blvd NMED FACILITY #30287

# SUMMARY OF GROUND WATER ELEVATION MEASUREMENTS

WELL NUMBER	ELEVATION (feet above datum)	DATE	STATIC (feet BG)	WATER LEVEL (feet AD)	(+) = RISING (-) = FALLING
W-12	4934.13	9/26/00	8.34	4925.79	
		5/18/01	8.17	4925.96	0.17
		7/2/01	8.54	4925.59	-0.37
		10/3/01	8.40	4925.73	0.14
W-13	4933.68	9/25/00	7.93	4925.75	
		5/18/01	7.73	4925.95	0.20
		7/2/01	8.10	4925.58	-0.37
		10/3/01	7.96	4925.72	0.14
W-14	4934.44	9/25/00	8.72	4925.72	
		5/18/01	8.53	4925.91	0.19
		7/2/01	8.89	4925.55	-0.36
		10/3/01	8.76	4925.68	0.13
W-16	4933.13	9/26/00	11.06	4922.07	
		5/18/01	7.28	4925.85	3.78
		7/2/01	7.63	4925.50	-0.35
		10/3/01	7.52	4925.61	0.11
W-17	4932.28	9/26/00	6.63	4927.50	
		5/18/01	6.46	4927.67	0.17
		7/2/01	6.81	4927.32	-0.35
		10/3/01	6.71	4925.57	0.10
W-20D	4934.15	9/26/00	8.43	4925.25	
		5/18/01	8.27	4925.41	0.16
		7/2/01	8.64	4925.04	-0.37
		10/3/01	8.50	4925.65	0.14
W-21D	4934.19	9/26/00	8.43	4926.01	
		5/18/01	8.29	4926.15	0.14
		7/2/01	8.68	4925.76	-0.39
		10/3/01	8.52	4925.67	0.16
W-23	4931.84	9/26/00	6.51	4926.62	
		5/18/01	6.24	4926.89	0.27
		7/2/01	6.70	4926.43	-0.46
		10/3/01	6.56	4925.28	0.14
VM-1	4933.00	1/16/01	7.00	4925.28	
		5/18/01	7.17	4925.11	-0.17
		7/2/01	7.52	4924.76	-0.35
		10/3/01	7.36	4925.64	0.16
VM-2	4932.84	1/16/01	7.12	4927.03	
		5/18/01	6.96	4927.19	0.16
		7/2/01	7.34	4926.81	-0.38
		10/3/01	7.21	4925.63	0.13

# TABLE 3 99-01-1186-01 • Rodger's 2615 Isleta Blvd NMED FACILITY #30287

# SUMMARY OF GROUND WATER ELEVATION MEASUREMENTS

WELL NUMBER	ELEVATION (feet above datum)	DATE	STATIC (feet BG)	WATER LEVEL (feet AD)	(+) = RISING (-) = FALLING
VM-3	4933.23	1/16/01	7.38	4926.81	
V 0	4500.20	5/18/01	7.38	4926.81	0.00
		7/2/01	7.75	4926.44	-0.37
		10/3/01	7.61	4925.62	0.14
VM-4	4933.30	1/16/01	7.45	4924.39	0.11
	1000.00	5/18/01	7.45	4924.39	0.00
		7/2/01	7.83	4924.01	-0.38
		10/3/01	7.68	4925.62	0.15
VM-5	4933.28	1/16/01	7.56	4925.44	51.5
		5/18/01	7.55	4925.45	0.01
		7/2/01	7.91	4925.09	-0.36
		10/3/01	7.77	4925.51	0.14
VM-7	4934.09	1/16/01	9.23	4923.61	-
		5/18/01	8.23	4924.61	1.00
		7/2/01	8.58	4924.26	-0.35
		10/3/01	8.44	4925.65	0.14
VM-8	4933.74	5/18/01	7.77	4925.07	-
		7/2/01	8.14	4925.60	-0.28
		10/3/01	8.00	4925.74	0.14
FTW-1	4933.59	1/16/01	7.74	4925.49	
		5/18/01	7.78	4925.45	-0.04
		7/2/01	8.10	4925.13	-0.32
		10/3/01	7.96	4925.63	0.14
FTW-2	4932.94	1/16/01	7.10	4926.20	
		5/18/01	7.09	4926.21	0.01
		7/2/01	7.47	4925.83	-0.38
		10/3/01	7.33	4925.61	0.14
FTW-3	4934.10	1/16/01	8.21	4925.07	
		5/18/01	8.21	4925.07	0.00
		7/2/01	8.56	4924.72	-0.35
		10/3/01	8.43	4925.67	0.13
FTW-4	4932.79	1/16/01	6.93	4927.16	
		5/18/01	6.94	4927.15	-0.01
		7/2/01	7.30	4926.79	-0.36
		10/3/01	7.16	4925.63	0.14

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Data checked \_\_\_\_\_ / \_\_\_\_

# TABLE 4 99-01-1186-05 • Rodger's 2615 Isleta Blvd. SW NMED FACILITY #30287

Summary of Tasks Performed in the Field

DATE	FIELD TECH.	DESCRIPTION	
9/21/00	KGF, MB	Initial sampling round(1st Qtr)-all existing wells, site survey.	
10/12/00-10/13/00	BB, TC	Drilling on site, soil samples taken.	
11/28/00	BB, TC	Drilling on site, soil samples taken.	
1/16/01	TC, SG	Collect GW samples, new wells	
2/21/01	BB, TC	Drilling on site, soil samples taken.	
5/18/01 & 5/21/01	KL, MB	2nd Quarterly sampling round, 13 selected wells.	
7/2/01	KL, MB	3rd Quarterly sampling round, 13 selected wells, EPA Method 8270 on two wells.	
10/3-4/01	PJB	4th Quarterly sampling round, 13 selected wells.	

Data checked \_\_\_\_\_ / \_\_\_\_

# APPENDIX 1

Sampling Protocol

Prior to any sampling, the water level in each monitoring well was measured. Ground water elevations (from datum) were determined using survey data collected during the Hydrogeologic Investigation. Temperature, pH and conductivity measurements were taken during well purging to document well stabilization. At least three (3) well bore volumes were removed from each well prior to collection of ground water samples using dedicated disposable bailers. Samples were collected using strict chain-of-custody procedures, stored on ice in a cooler, and hand-delivered to Pinnacle Laboratories, in Albuquerque, New Mexico, for analyses. The ground water samples were analyzed for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), Methyl-t-Butyl Ether (MTBE), Tri-Methyl Benzenes (TMBs), Ethylene Dibromide (EDB), Ethylene Dichloride (EDC), Naphthalene, 1-Methylnaphthalene and 2-Methylnaphthalene by EPA Method 8260 PBMS (expanded naphthalenes). Natural attenuation indicator parameters iron, phosphate, nitrate, sulfide, alkalinity, pH, dissolved oxygen, conductivity and temperature were analyzed and measured in the field using the appropriate field test kits and equipment.

# APPENDIX 2

Field Notes

# APPENDIX 3

**Analytical Laboratory Reports**